BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

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IN THE MATTER OF THE REQUEST FOR AGENCY ACTION AND APPEAL OF DIVISION DETERMINATION TO APPROVE SIGNIFICANT REVISION TO PERMIT TO ALLOW MINING OF TANK SEAM BY CO-OP MINING COMPANY BY PETITIONERS NORTH EMERY WATER USERS ASSOCIATION, HUNTINGTON-CLEVELAND IRRIGATION COMPANY, AND CASTLE VALLEY SPECIAL SERVICES DISTRICT, CARBON COUNTY, UTAH	:	ORDER DOCKET NO. 94-027 CAUSE NO. ACT/015/025

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Pursuant to the Appeal of the Division Determination to Approve the Significant Revision of Permit to Allow Mining of the Tank Seam by Co-Op Mining Company By Petitioners North Emery Water Users Association, Huntington-Cleveland Irrigation Company, and Castle Valley Special Services District, this cause came on for hearing before the Board of Oil, Gas & Mining (the "Board"), Department of Natural Resources, State of Utah, on Tuesday, October 25, 1994 and Thursday, November 17, 1994 in the Boardroom of the Division of Oil, Gas & Mining (the "Division"), 3 Triad Center, Suite 520, 355 West North Temple, Salt Lake City, Utah.

The following Board members were present and participated in the hearing and the Board's decision herein:

David D. Lauriski, Chairman
Jay L. Christensen
Judy F. Lever
Thomas B. Faddies
Raymond Murray
Kent G. Stringham

Board Member Elise Erler participated in the hearing, but did not participate in the Board's decision in this matter.

The Board was represented by John W. Andrews, Esq. and the Division was represented by Thomas A. Mitchell, Esq., both Assistant Attorneys General for the State of Utah.

Petitioners North Emery Water Users Association and Huntington-Cleveland Irrigation Company were represented by J. Craig Smith, Esq., of the law firm of Nielsen & Senior, Salt Lake City. Petitioner Castle Valley Special Service District was represented by Jeffrey W. Appel, Esq., of the law firm of Appel and Mattson, Salt Lake City. Respondent Co-Op Mining Company was represented by Carl E. Kingston, Esq., and F. Mark Hansen, Esq., both of Salt Lake City.

NOW THEREFORE, the Board, having considered the pleadings filed by the parties, the testimony of the witnesses, and the exhibits presented at said hearing, and being fully advised in the premises, now enters the following Findings of Fact, Conclusions of Law, and Order.

FINDINGS OF FACT

A. Introduction.

1. The petitioners in this proceeding are appealing the determination of the Division of Oil, Gas & Mining (the "Division") to grant Co-Op Mining Company ("Co-Op") a significant revision to its mining permit under the Utah Coal Mining and Reclamation Act, Utah Code Ann. § 40-10-1 et seq.

2. The significant revision to Co-Op's mining permit would allow Co-Op to mine a coal seam known as the Tank Seam within Co-Op's existing Bear Canyon Mine in Emery County, Utah. The Tank Seam is located approximately two hundred vertical feet above Co-Op's existing coal mining operations, which are currently being conducted in the Blind Canyon coal seam in the Bear Canyon mine.

3. Petitioners North Emery Water Users Association, Huntington-Cleveland Irrigation Company and Castle Valley Special Services District (collectively the "Water Users") are engaged in the collection and distribution of culinary and irrigation water to users in the general vicinity of the Bear Canyon mine.

4. The Water Users generally contend that Co-Op's existing and proposed mining operations have negatively affected the quantity and quality of water flow from two springs, Birch Springs and Big Bear Springs. Birch Spring is managed by and provides water for the water systems of petitioners Huntington-Cleveland Irrigation Company and North Emery Water Users. **Hearing Transcript (hereinafter cited as "T. __.") at 40.** Big Bear Spring is managed by and provides water for the water system of petitioner Castle Valley Special Service District. **T. 74-76.**

5. The Division approved Co-Op's Application for a Significant Revision to permit mining in the Tank Seam by a decision and accompanying Technical Analysis dated July 21, 1994.

6. The Water Users timely appealed the Division decision on August 22, 1994, and requested that the Board of Oil, Gas &

Mining (the "Board") either reverse the Division's approval or, in the alternative, require Co-Op to provide replacement water supplies to the Water Users at Co-Op's sole expense.

7. The Board conducted an extensive formal evidentiary hearing in this matter on October 25, 1994 and November 17, 1994, and additionally considered post-hearing memoranda filed by the parties.

8. At the evidentiary hearing, the Water Users presented testimony by certain of its employees and officers concerning the history and development of Birch and Big Bear Springs, and historic flow rates of the springs. The Water Users also presented expert testimony by Mr. Bryce Montgomery, a consulting geologist, about the alleged impacts of Co-Op's mining activities on the quantity and quality of flows from the springs, and the geologic mechanisms by which such impacts might occur.

9. Co-Op presented evidence in rebuttal by its expert consultants that all water encountered within the Bear Canyon mine was for a variety of reasons hydrologically separate from Big Bear and Birch Springs. Co-Op's experts also testified that the Tank Seam, the area which it sought to mine pursuant to its application for a Significant Permit Revision, was essentially dry and not in any way linked to the disputed aquifer(s).

10. The Division also presented testimony by Division hydrologist Tom Munson and Division permit supervisor Darron Haddock concerning Co-Op's application and associated hydrologic studies.

B. Area Geologic Description.

11. The Bear Canyon Mine is located near the eastern margin of the Wasatch Plateau Coal Field in Bear Creek Canyon, a tributary to Huntington Canyon, in Emery County, Utah. **Exhibit D, p. 1-2.** In the Bear Canyon mine, coal is currently removed from two generally horizontal seams within the Blackhawk Formation, the Blind Canyon Seam and the Hiawatha Seam. **Id. at p. 2-4.** Co-Op began operations at the mine in 1981. **T. 168.**

12. The Tank Seam, which Co-Op seeks to mine pursuant to the disputed application for Significant Permit Revision, is also located within the Blackhawk formation, 220 to 250 vertical feet above the Blind Canyon seam. **Id. at p. 2-6.**

13. In the vicinity of the Bear Canyon mine, the stratigraphic sequence from the surface downward includes the North Horn Formation, the Price River Formation, the Castlegate Sandstone, the Blackhawk Formation, the Star Point Sandstone, and the Mancos Shale. **Exhibit C, Table 2-4.**

14. In the vicinity of the mine, groundwater is contained within the Star Point sandstone. The Star Point sandstone is composed of three separate members: the upper member is the Spring Canyon member, the middle member is the Storrs member; and the lower member is the Panther member. **T. 105-106.**

15. Birch Springs is located on the east side of Highway 31 in Huntington Canyon between Bear Canyon and Trail Canyon. **Exhibit 1 ; T. 39.** Big Bear Spring is located on the north side of Bear Canyon approximately one half mile from Co-Op's mine

portal into the Blind Canyon seam. **T. 77-78.** Neither spring is located within the permit area. **Exhibit C, p. 2-9.**

16. The two springs both issue from the Panther member of the Star Point sandstone where it contacts the Mancos shale. The Mancos shale is impervious to water and acts as a floor to hold the groundwater above it in overlying formations. **T. 105.**

C. Disputed Hydrologic Issues.

17. Petitioners called as an expert witness Mr. S. Bryce Montgomery, a consulting professional geologist, with experience in groundwater hydrology. **T. 99-100.**

18. Mr. Montgomery's basic theory of the hydrology of the area was based upon the concept of a regional aquifer. The base of this aquifer is the level at which the Panther member of the Star Point sandstone contacts the impermeable Mancos shale. It is at this level that Birch and Big Bear Springs issue forth. **T. 106.** Mr. Montgomery testified that the aquifer has a potentiometric surface (the level below which the aquifer is fully saturated) that slopes upward to the north toward Gentry Mountain. **T. 106.** As the potentiometric surface slopes upward to the north, Mr. Montgomery posited that it reached up into the Blackhawk formation which contains the coal beds, and where it is intercepted by coal mining. **T. 106.**

19. Mr. Montgomery testified that groundwater in this aquifer flows not only laterally through the pervious sandstone beds, but also vertically downward through the strata by means of extensive faulting in the area. **T. 106-107.** Birch and Big Bear

Springs, along with the Co-Op mine, are located between two large faults known as the Pleasant Valley Fault and the Bear Canyon fault. **T. 107; Exhibit 8.**

20. Mr. Montgomery's conclusion about the effects of Co-Op's mining was that the north portion of Co-Op's mining in the Blind Canyon seam had intercepted the potentiometric surface of the regional aquifer. He testified that water that would normally flow in its natural course down through the bedding and the fracture system to discharge naturally from the subject springs was instead being intercepted by coal mining and conveyed out of the groundwater system. **T. 122, 141.** This would in turn reduce the amount of water in storage for the springs, and negatively affect their flow for many years. **T. 122.**

21. Mr. Montgomery also testified about what he considered to be anomalous flows from the subject springs caused by Co-Op's alleged dumping of surplus water in the south end of the mine, demonstrating a linkage between the mine workings and the springs. **T. 147-148.** Mr. Montgomery testified that this water carried or picked up calcium sulfate, resulting in the anomalous levels of calcium and sulfates shown for 1991 by Exhibit 18. **T. 148.**

22. Co-Op called as expert witnesses Mr. John D. Garr and Mr. Richard B. White, respectively a consulting geologist and a consulting hydrologist with Earthfax Engineering ("Earthfax"). Earthfax was hired by Co-Op to revise the hydrologic characterization of the Bear Canyon mine and the Statement of

Probable Hydrologic Consequences ("PHC") for the mine. **T. 200.**

23. Earthfax's activities included the drilling of four in-mine monitoring wells downward from the Blind Canyon seam to the Mancos shale, with hydrologic testing of each of the three members of the Star Point sandstone. **T. 201.**

24. Mr. Garr disputed Mr. Montgomery's testimony concerning the existence of a regional aquifer, testifying that more site-specific data led him to reach a different conclusion. **T. 202.**

25. Mr. Garr testified that there are three separate aquifers below the mine, each with a separate piezometric surface and each separated and confined by shale interbedding within the Star Point sandstone. **T. 208-209.** He concluded that the confinement of the aquifers, particularly in the northernmost drill hole, suggested that the recharge for the aquifers supplying the springs is miles to the north at a higher elevation, rather than in the Co-Op area. **T. 209, 211, 261, 288-289.**

26. Mr. White testified that the recharge area was far to the north of the mine in a "shatter zone" of fractured strata where water there would percolate easily downward into the Star Point sandstone. **T. 312.** The significance of this zone was that the recharge area for Big Bear and Birch springs in the Star Point sandstone would be lower than the mine, and not subject to being affected by it. **T. 312-313, 322-326, 339-340.**

27. Both Mr. Garr and Mr. White concluded that any water being intercepted by mining in the Blind Canyon seam is a

confined aquifer within the uppermost Spring Canyon member of the Star Point sandstone, which due to the confinement of the aquifers is separate from the source of the springs. **Exhibit C, p. 2-33; T. 251, 255-256, 284, 288-289.** They testified that because the Panther member, which is the source of water to both Birch and Big Bear springs, is hydrologically disconnected from the Spring Canyon member, any aquifer in that member encountered while mining would not affect spring flow. **T. 358-359, 362.**

28. Both Mr. Garr and Mr. White testified that water being encountered in the Blind Canyon seam generally represented perched aquifers, rather than the interception of the regional aquifer posited by Mr. Montgomery. **T. 223, 285.** Relying on a United States Geologic Survey report concerning mine dewatering in the area, Mr. Garr testified that the rate of natural downward flow into the regional aquifer is unlikely to be affected by the interception of perched aquifers. **T. 223.**

29. Mr. Garr and Mr. White testified that the location of the Blind Canyon fault was highly significant to the issue of whether Co-Op's mining in the Blind Canyon seam is affecting the flow of Birch Springs. Birch Springs is actually 800 feet to the west of the Blind Canyon fault, so the fault lies between the mine and the springs. **T. 118, 212, 293-294.** Mr. Garr testified that if groundwater were moving from the mine into the fault (which lies between the mine and Birch Springs) the water would either be stopped by the fault or the fault would act as a conduit for the water to emerge at the surface. **T. 213, 266.**

Because no spring exists where the Blind Canyon fault intersects the surface, Mr. Garr concluded that there was no connection between groundwater encountered in the mine and Birch Springs. **T. 213. 266-267.**

D. Hydrologic Effect of Mining In The Tank Seam.

30. There was substantial legal dispute between Co-Op and the Water Users concerning the scope of the Board's review of the probable hydrologic consequences of mining. Co-Op argued that the only factual issue that the Board should consider was whether mining in the Tank Seam would cause material damage to the hydrologic balance. The Water Users argued that the Significant Permit Revision would allow the Bear Canyon mine to remain in operation, and would allow mine dewatering to continue. They contended the Board is therefore required to consider the possible hydrologic impact of all mining in the Bear Canyon mine at this time, rather than the impact only of mining the Tank Seam.

31. As more fully set forth in the succeeding paragraphs, the Board finds that, based upon the evidence, Co-Op's proposed mining in the Tank Seam will not cause material damage to the hydrologic balance.

32. The Water User's expert Mr. Montgomery admitted that no appreciable groundwater exists in the Tank Seam, and that the potentiometric surface of the principal aquifer was below the Tank Seam. **T. 112, 123-125, 162.** This testimony was corroborated by Co-Op's witness Mr. Garr, who testified that any

aquifer was well below the Tank Seam. **T. 265.**

33. Mr. Montgomery incorrectly assumed that there would be an internal ramping system within the mine between the Tank Seam and the area of the Blind Canyon seam presently being mined. **T. 113, 162.** This assumption led Mr. Montgomery to conclude that the interval between the Tank Seam and the Blind Canyon Seam would be affected. **T. 113.** Mr. Montgomery also posited that contaminants deposited within the mine workings in the Tank Seam, and outside from road salt, would be conveyed downward to the base of the hydrologic system over time.

34. In fact, Co-Op will transport coal from the Tank Seam by means of a separate portal, and then into a vertical shaft back into the Blind Canyon seam to Co-Op's existing conveyor system. **T. 174-176.** This shaft intersects the south area of Co-Op's mine workings, in an area that is entirely dry. **T. 175.** The area underlying the access road is also dry. **T. 175.** This shaft encounters no water seepage anywhere in the hole between the Tank Seam and the Blind Canyon seam. **T. 274.**

35. Mr. Montgomery also testified that the removal of coal from the Tank Seam would eventually cause the collapse of overlying beds, increasing jointing and fracturing and furthering the conveyance of water and potential contaminants downward. **T. 113.**

36. Mr. Montgomery additionally testified that, although the Tank Seam was above the regional aquifer, it might encounter small perched aquifers, and interrupt the flow downward of water

contained in those aquifers through fractures, thereby reducing supply to the regional aquifer. **T. 124-130, 162-163.**

37. The Board notes the inconsistency between Mr. Montgomery's testimony that mining would eventually cause additional fracturing, thus increasing downward flows, with his testimony that mining would limit downward flows.

38. Co-Op's witnesses presented evidence rebutting Mr. Montgomery's testimony that mining within the Tank Seam could have negative hydrologic effects. In order to test whether water existed within the Tank Seam, Co-Op conducted a testing program involving the drilling of eight holes upward from the Blind Canyon seam into the Tank Seam at various locations. **T. 171, 179.** All but one of these drill holes was essentially dry, although one hole encountered flows of approximately a half gallon per minute. **T. 172, 283.** Similarly, the eight foot diameter bore hole between the two levels was also dry. **T. 283.**

39. Because there is little water in the Tank Seam, there is little possibility that any contaminants could be carried downward from the Tank Seam into the aquifers supplying the Water Users' springs. **T. 285-287, 344.** There is no significant recharge to the aquifers coming from the ridge above the mine because it is very narrow and has little flat surface to catch runoff. **T. 211, 220-222.**

40. In summary, the evidence establishes that:

(a) the Tank Seam is essentially dry;

(b) the Tank Seam is well above the "regional aquifer" theorized by the Water Users;

(c) no direct connection between any water that might in the future be located in the Tank Seam and the ostensible regional aquifer has been established;

(d) the surface above the seam has limited recharge potential, further reducing the risk of contaminants being conducted downward.

41. Based upon this evidence, the Board finds that mining in the Tank Seam will not cause material damage to the hydrologic balance, either through reduction in supply or contamination. Co-Op has satisfied its burden of proof on this issue.

E. Hydrologic Effect of Mining In the Blind Canyon Seam.

42. Because the parties devoted a substantial portion of their evidence to the hydrologic effects of mining in the Blind Canyon seam, the Board feels obligated to make findings of fact concerning this issue.

43. The Board is faced with two differing expert models of the effect of mining in the Blind Canyon seam on aquifer(s). The Water Users' expert, Mr. Montgomery, testified to the existence of a regional aquifer with a potentiometric surface sloping from north to south, with Big Bear and Birch Springs exiting from the aquifer at the contact of the Star Point Sandstone. Mr. Montgomery theorized that the northern portions of Co-Op's mine workings had intersected the potentiometric surface, and that the removal of substantial quantities of this water through

mine dewatering had reduced current and future supplies to the Water Users' springs.

44. Co-Op's experts Messrs. Garr and White instead theorized separate aquifers in the Star Point sandstone rather than a single regional aquifer. They relied upon drilling in the mine that had established the existence of shale tongues interlineated between the three members of the Star Point sandstone. They testified that these shale tongues were generally impervious, and created essentially separate aquifers with separate potentiometric surfaces in each of the three sandstone members. Because the two disputed springs were supplied only from the lowest member, the Panther, any intersection between mining and the potentiometric surface of the separate aquifer in the upper Spring Canyon member would not affect spring flow.

45. While the Board recognizes that the evidence before it on this issue is not as clear as that concerning mining in the Tank Seam, it is ultimately convinced that Co-Op's hydrologic model is more convincing. As more fully set forth below, the Board believes that Co-Op's model is linked more closely to local conditions, and is supported by radiologic and chemical analyses establishing dissimilarities between mine waters and waters emanating from the two springs.

46. In preparing the PHC, Earthfax conducted tritium testing of waters encountered in the mine and flows from the two springs. Tritium is an isotope of hydrogen that was released

into the earth's atmosphere during open-air nuclear testing in the 1950s and 1960s. Tritium testing can be used to determine the "age" of water, because water that has been underground since before the nuclear era will have only small amounts of tritium, while new water exposed to fallout will have higher levels. **T. 287-288.**

47. Tritium testing of water encountered in the mine showed that it was "old" water with low concentrations of tritium, while water from Big Bear Spring had tritium concentrations approximately ten times greater. **T. 247, T. 288.** This data indicates that Big Bear spring has a source different from the water encountered by Co-Op in the Blind Canyon seam. **T. 288.** While Mr. Montgomery speculated that higher tritium levels in Big Bear Spring could be caused by water seeping across surface formations prior to being tested, the Board does not find this testimony convincing.

48. Tritium testing did not rule out similarity between the mine water and waters tested from Birch Spring, as both waters were found to be "old" water. **T. 247-248.** However, chemical analysis of the mine water and water from the Birch Springs showed chemical dissimilarities between the two waters, particularly in the area of sulfate content. **T. 290, 299-300, 304-306; Exhibit C, p. 2-19.** The Water Users countered that higher levels of sulfates could be the result of spring water being affected by surface mineralization.

49. The Board also concludes that the evidence linking

declines in flows at the two springs to activities in the mine rather than the extensive drought Utah has suffered in recent years was unconvincing. For example, the Board notes that the Water Users' witness Darrell Leamaster, a civil engineer and District Manager of petitioner Castle Valley, acknowledged that high flows of up to 230-240 gallons per minute from Big Bear Spring in the 1983-1984 time period were linked to wet weather at the time. **T.79, 97.** Similarly, Exhibit 15, relied upon by the Water Users, appears to show a response in flow from Big Bear spring to high precipitation in the early 1980s. For Birch Springs, actual flow data was limited to several years. **See Exhibit 16; T. 338.** Testimony about higher flows when the spring was reworked may lack relevance, since the testimony concerned the high water years of 1983-84. **T. 58.**

50. Testimony by the Water Users' witnesses also focused on anomalous flows in Big Bear Spring in 1991, coupled with spikes in sulfates and calcium concentrations. **Exhibit 18; T. 147-148.** Co-Op's witness Mr. White disputed any causal connection between activities in the mine and these flows. **T. 327.** The Board does not believe that either side's evidence on this issue is dispositive.

51. The Water Users attempted, over objection by Co-Op, to present Little Bear Springs as a "control." Little Bear Springs is located across Huntington Canyon from the two subject springs and the Bear Canyon Mine, and so could not be affected by mining activity. The Water Users argued that, although part of the same

regional aquifer, it did not show the same decline in flow as Big Bear and Birch Springs, and so was probative of whether flows from the latter two springs had been affected by mining. The Board is convinced by Co-Op's expert testimony that the regional aquifer system in the mine area is complex, and that the hydrology of springs in the area is sufficiently different that they are generally not analogous. **T. 208, 215-216.** The Board also notes that even the U.S.G.S. report relied upon by Mr. Montgomery cautions against comparisons between springs in the area due to differing geology. **T. 216.** Accordingly, the Board finds that Little Bear Spring is not useful as a control in this matter.

52. In summary, the evidence establishes that:

(a) Tritium analysis establishes that Big Bear spring and water encountered by Co-Op during mining are not of the same age, and thus hydrologically distinct;

(b) chemical analysis supports, although it alone does not conclusively establish, the conclusion that Birch spring and the mine water are hydrologically distinct;

(c) the existence of the Blind Canyon fault between the mine and Birch spring would preclude waters encountered in the mine from reaching Birch spring;

(d) Co-Op's more-localized hydrologic model supports the conclusion waters encountered in the Bear Canyon mine from perched aquifers and/or the Spring Canyon member of the Star Point sandstone are hydrologically distinct from the springs, which issue from the Panther member of the Star Point sandstone.

53. The Board therefore finds that based upon the evidence before it, Co-Op's mining of the Blind Canyon seam is not likely to cause material damage to the hydrologic balance in the mine area, and is not linked to declines, if any, in spring flows from Big Bear and Birch Springs.

CONCLUSIONS OF LAW

1. Pursuant to Utah Code Ann. § 40-10-11(2), Co-Op has the burden of affirmatively demonstrating the following:

(a) that the permit application is accurate and complete, and that all statutory and regulatory requirements have been complied with;

(b) that reclamation can be completed as required by law and the proposed reclamation plan; and

(c) that the assessment of the probable cumulative impact of all anticipated mining in the area on the hydrologic balance has been made by the Division, and the proposed operation of the same has been designed to prevent material damage to

the hydrologic balance outside the permit area.

2. The feasibility of reclamation and the adequacy of Co-Op's reclamation plan, a required showing under Utah Code Ann. § 40-10-11(2)(b), has not been challenged in this proceeding, and is not an issue here.

3. The Board concludes that the permit application was in fact complete, and that the requirements of the Utah Coal Mining and Reclamation Act and associated regulations have been complied with. The Water Users argue that the permit application is incomplete, and not in compliance with law, because the document incorporating the Division's determination of Probable Hydrologic Consequences allegedly does not include baseline data. Utah Code Ann. § 40-10-10(2)(c) requires a Division determination of the probable hydrologic consequences of mining operations. Such a determination was in fact made and approved by the Division. See Exhibit C. The Water Users contend that Co-Op's permit application does not comply with Division Rule R645-301-724, which requires baseline information concerning groundwater hydrology, because Table 2-5 of the PHC indicates that flow rates for the subject springs were not measured at the inception of mining. The Board is convinced that this omission is harmless. The Cumulative Hydrologic Impact Assessment (Exhibit D) for the proposed Significant Permit Revision contains the exact baseline information for the flow from these springs that the Water Users claim is absent. **Exhibit D, p. 2-17, Appendix D.** The absence of

this information from one table in the PHC when it is present in another portion of the permit application package is not significant. Utah Code Ann. § 40-10-11(2)(a) has been satisfied.

4. At the hearing in this matter, the parties disputed whether the possible effects of mining in the Blind Canyon seam should have been considered by the Division in ruling upon the Significant Permit Revision application. Co-Op's application for Significant Permit Revision involved only a proposal to mine the Tank Seam. Co-Op's current operations in the Blind Canyon seam are authorized under the terms of Co-Op's existing permit, which has not been challenged in this proceeding. The principal issue of law before the Board is whether possible negative hydrologic impacts of operations in the Blind Canyon seam should be considered here, or whether only impacts from mining in the Tank Seam may be considered.

5. If only the subject matter of the Significant Permit Revision application is to be considered, it is clear that Co-Op has met its burden of demonstrating that material damage to the hydrologic balance will not occur from mining in the Tank Seam. The great weight of the evidence showed that the Tank Seam was well above the regional aquifer theorized by the Water Users, that it was essentially dry, and that any effect that such mining would have by either limiting the downward flow of water or allowing contaminants into the hydrologic system was purely speculative.

6. One significant fact is that even if the Board were to

deny Co-Op's application for a Significant Permit Revision, mining could continue in the Blind Canyon seam under Co-Op's existing permit. The Board therefore does not believe that it is relevant to consider the hydrologic impacts of existing mining in the permit area. Nonetheless, because the bulk of the evidence presented by the parties focused on cumulative impacts of all mining, the Board has made factual findings on this issue. The Board has found that the factual evidence does not support the conclusion that the continuation of Co-Op's previously authorized operations in the Bear Canyon mine will cause material damage to the hydrologic balance.

7. Co-Op presented a hydrologic model that appears to the Board to better describe local conditions than the model presented by the Water Users. Radiologic and chemical analysis appears to differentiate water found in the mine from water at Big Bear and Birch Springs. The Board simply has not heard convincing evidence that declines in flows at the two springs have resulted from mine dewatering instead of the drought conditions of recent years. The Board therefore concludes that the requirements of Utah Code Ann. § 40-10-11(2)(c) concerning material damage to the hydrologic balance have been satisfied.

8. At the hearing, the Board took under advisement Co-Op's motion to exclude evidence of damage to the Water Users' springs that took place prior to 1991, the date when Co-Op's mining permit for the Bear Canyon mine was last approved. Co-Op argued that the Water Users were collaterally estopped from raising

issues that had been raised and readjudicated before the Board and Division in the 1991 proceeding. The Board has chosen to consider all evidence before it concerning alleged damage to the Water Users' springs, and accordingly denies Co-Op's motion.

9. The water replacement requirements of 30 U.S.C. § 1309a are not applicable under the circumstances. That statute, which was enacted as part of the Federal Energy Policy Act of 1992, requires the operators of underground mines to replace promptly any water supplies adversely impacted by underground mining operations. The Water Users have failed to prove to the Board as a factual matter that either the quantity or quality of their water has been adversely impacted by mining at the Bear Canyon mine, so the statute may not be applied to Co-Op here.

10. In addition, the Board does not believe that a permit revision appeal such as this one is the proper forum for raising the federal statutory water replacement requirement. The Utah legislature has yet to incorporate the water replacement requirement for underground mines into the Utah Coal Mining and Reclamation Act. See Utah Code Ann. § 40-10-1 et seq. The Board questions whether it has jurisdiction under the Utah act to require water replacement pursuant to 30 U.S.C. § 1309a. This proceeding for review of a Division permit decision simply is not the proper forum for the Water Users' water replacement claims.

11. The Board finds that, under the circumstances set forth above, no attorneys fees, costs, or expenses should be awarded in this proceeding pursuant to Utah Code Ann. § 40-10-22(3)(e).

ORDER

IT IS THEREFORE ORDERED that Petitioners' appeal is denied, and the Division's action approving Co-Op's Application for a Significant Permit Revision is upheld. No costs, expenses or attorney's fees are awarded.

ISSUED & SIGNED this 13th day of June, 1995.

STATE OF UTAH
BOARD OF OIL, GAS & MINING

Dave D. Lauriski
Chairman

Approved as to Form:

John W. Andrews
Assistant Attorney General

CERTIFICATE OF MAILING

I hereby certify that I caused a true and correct copy of the foregoing Board ORDER for Docket No. 94-027, Cause No. ACT/015/025 to be mailed by certified mail, postage prepaid, on the 14 day of June, 1995, to the following:

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